03050105-100

(Buffalo Creek)

General Description

Watershed 03050105-100 is located in Cherokee County and consists primarily of ***Buffalo Creek*** and its tributaries. The watershed occupies 9,921 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Herndon-Helena-Goldston-Georgeville series. The erodibility of the soil (K) averages 0.34, and the slope of the terrain averages 10%, with a range of 2-45%. Land use/land cover in the watershed includes: 65.8% forested land, 22.4% agricultural land, 8.6% urban land, 2.8% scrub/shrub land, and 0.4% barren land.

Bee Branch flows across the North Carolina border and drains into Buffalo Creek, which flows into the Broad River. There are a few ponds (totaling 6.6 acres) and19.5 stream miles in this watershed, all classified FW.

Water Quality

Station #	Type	Class	Description
B-740	BIO	FW	BUFFALO CREEK AT SC 198
B-119	S	FW	BUFFALO CREEK AT S-11-213, 2.2 MI NNW OF BLACKSBURG
B-057	S	FW	BUFFALO CREEK AT SC 5, 1 MI W OF BLACKSBURG

Buffalo Creek - There are three monitoring sites along Buffalo Creek. At the upstream site ***(B-740),*** aquatic life uses are fully supported based on macroinvertebrate community data. At the next site downstream ***(B-119),*** aquatic life uses are fully supported. A significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria concentrations.

At the furthest downstream site ***(B-057),*** aquatic life uses are partially supported due to occurrences of copper in excess of the aquatic life acute standards. In water, a very high concentration of cadmium and a very high concentration of chromium were measured in 1995 and indeno(1,2,3-cd)pyrene was detected in 1995. In sediment, bis(2-ethylhexyl)phthalate was measured in the 1997 sample and tetrachloroethene was detected in the 1998 sample. A significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria concentrations.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)* *COMMENT*	*NPDES#* *TYPE* *LIMITATION*
BUFFALO CREEK SPEEDWAY #66/BLACKSBURG PIPE #: 002 FLOW: 0.0075 WQL FOR BOD5,DO,TRC,NH3N	SC0042196 MINOR INDUSTRIAL WATER QUALITY
BUFFALO CREEK TNS MILLS INC./BLACKSBURG PLT PIPE #: 001 FLOW: M/R	SCG250043 MINOR INDUSTRIAL EFFLUENT
BUFFALO CREEK TRIBUTARY BROAD RIVER TRUCK STOP PIPE #: 001 FLOW: 0.01 WQL FOR TRC,NH3N	SC0032433 MINOR DOMESTIC WATER QUALITY

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
MONSANTO TEXTILES CO. INDUSTRIAL	IWP-179 (SCD001700863) --------

Growth Potential

There is a moderate potential for growth in this watershed, which contains a portion of the Town of Blacksburg. Major growth is expected along the I-85 corridor, which stretches across the watershed. Commercial growth is also associated with the I-85 corridor near the Town of Blacksburg.